

International Journal of Biometeorology

Journal of the International Society of Biometeorology

edited by

R. W. Gloyne
(Editor-in-Chief)

and

U. Blum C. V. Smith and J. A. J. Stolwijk
(Technical Editors)

VOLUME 26

1982

Published by Swets & Zeitlinger B.V., Lisse

Typesetting: Hoi Studio B.V., Rotterdam
Printed in The Netherlands by Offsetdrukkerij Kanters B.V., Alblasserdam
© Copyright 1982 by Swets & Zeitlinger B.V., Amsterdam

CONTENTS OF VOLUME 26

	Page
Message to Authors and Readers	1
The Relative Influence of Urban Climates on Outdoor Human Energy Budgets and Skin Temperature. I. Modeling Considerations	3
..... <i>J. E. Burt, P. A. O'Rourke and W. H. Terjung</i>	
The Relative Influence of Urban Climates on Outdoor Human Energy Budgets and Skin Temperature. II. Man in an Urban Environment ..	25
..... <i>J. E. Burt, P. A. O'Rourke and W. H. Terjung</i>	
Standard Layers - A New Criterion of the Thermal Insulating Properties of Clothing	37
..... <i>M. V. Jokl</i>	
Age Related Patterns of Immunoglobulin Serum Levels in the Quechua Indians of Andean Mountains	49
..... <i>S. A. Memeo, L. Piantanelli, G. Mazzufferi, L. Guerra, N. Nikolitz and N. Fabris</i>	
The Discomfort-Index in Thessaloniki, Greece	53
..... <i>V. E. Angouridakis and T. J. Makrogiannis</i>	
Responses in Rectal and Skin Temperatures to Centrifugal Forces in Rats of Different Ambient Temperatures	61
..... <i>K. Ohara, H. Sato, N. Okuda, Y. Makino and Y. Isobe</i>	
Effects of Climate on the Thermoregulatory Responses of Male Buffalo (<i>Buffalo bubalis</i>) Calves Supplemented with Different Levels of Testosterone and TDN	73
..... <i>P. C. Gangwar</i>	
Mathematical Model of the Distribution of Small Negative Ions in Air Conditioned Rooms	81
..... <i>B. Chorowski and Z. Jaszewski</i>	
The Biophysically Active Waveforms of Atmospherics Incident on Gelatin Films	85
..... <i>H. Baumer and J. Eichmeier</i>	
National Medicometeorology Research Symposium of China 11-14 November 1980	91
..... <i>L. B. Hsia</i>	
Book Reviews	24, 36, 60, 80, 95
Announcement	96
In memoriam Dr. Boguslaw Maczyński	97
Relative Influence of Selected Cloud Types and Amounts on Human Energy Budgets and Skin Temperatures	99
..... <i>J. E. Burt, P. A. O'Rourke and W. H. Terjung</i>	

Environmental Profile and Milk Production of Friesian-Zebu Crosses in Nigerian Guinea Savanna	<i>M. O. Igono and Y. O. Aliu</i>	115
Environmental Factors Affecting Seasonal Variation in Immunity of Clinically Normal Dogs	<i>A. Garsd and M. Shifrine</i>	121
Physiological Responses of Mules on Prolonged Exposure to High Altitude (3650m)	<i>S. S. Riar, K. Shankar Bhat and J. Sen Gupta</i>	129
Swine Performance Model for Summer Conditions	<i>L. Christianson, G. L. Hahn and N. Meador</i>	137
The Effect of Seasons on Behaviour during Milking in Buffaloes (<i>Bos bubalis</i>)	<i>P. C. Gangwar</i>	147
The Effects of Negative Air Ions on Various Physiological Functions During Work in a Hot Environment	<i>O. Inbar, A. Rotstein, R. Dlin, R. Dotan and F. G. Sulman</i>	153
Air Ionisation in Radiotherapy Rooms	<i>K. Salaninski</i>	165
Abstracts of the Nineteenth Annual Meeting of the Japanese Society of Biometeorology, Hamamatsu, 28-29 November 1980		169
Abstracts Noted		146, 152, 164, 168
Book Reviews		196
William F. Petersen Foundation Awards presented by Dr. S. W. Tromp, President of the William F. Petersen Foundation, on Saturday 10 July 1982 at Oegstgeest, The Netherlands		197
Biometeorological Research Foundation Award presented by Dr. S. W. Tromp on Saturday 10 July 1982 at Oegstgeest, The Netherlands ..		203
The Incidence of the Sudden Infant Death Syndrome in Relation to Climate	<i>E. L. Deacon and A. L. Williams</i>	207
Platelet Count and Adhesiveness on Induction to High Altitude by Air and Road	<i>S. C. Sharma</i>	219
Body Temperature Responses of Savanna Brown Goat to the Harmattan and Hot-Dry Season	<i>M. O. Igono, E. C. I. Molokwu and Y. O. Aliu</i>	225
The Importance of Cavity Roosting and Hypothermia to the Energy Balance of the Winter Acclimatized Carolina Chickadee	<i>L. Mayer, S. Lustick and B. Battersby</i>	231
A Feasible Crop Yield Model for Worldwide International Food Production	<i>J. T. Hayes, P. A. O'Rourke, W. H. Terjung and P. E. Todhunter</i>	239

Recent Books	206
Nature and Resources	258
Abstracts Noted	259
In Memoriam Professor W. Victor Macfarlane	261
Relation of Precipitation and Temperature with Yield of Herbaceous Plants in Eastern Oregon	<i>Forrest A. Sneva</i> 263
The Use of an Agricultural Rainfall Index in Malaysia	<i>M. Z. Ghazalli and S. Nieuwolt</i> 277
Pineal Melatonin Synthesis in Syrian Hamsters: A Summary	<i>M. D. Rollag</i> 285
A 15-minute Light Pulse during Darkness Prevents the Antigonadotropic Action of Afternoon Melatonin Injections in Male Hamsters <i>R. J. Reiter, E. C. Hurlburt, T. S. King, B. A. Richardson, M. K. Vaughan and K. Y. Kosub</i>	295
Daily Melatonin Injections: Their Usefulness in Understanding Photo-periodism in <i>Peromyscus leucopus</i>	<i>G. Robert Lynch, Harley W. Heath and David J. Margolis</i> 305
Delayed Effect of Pinealectomy on Hibernation of the Golden-Mantled Ground Squirrel	<i>C. L. Ralph, H. J. Harlow and J. A. Phillips</i> 311
Role of Photoperiod and Melatonin in Seasonal Acclimatization of the Djungarian Hamster, <i>Phodopus sungorus</i>	<i>S. Steinlechner and G. Heldmaier</i> 329
Photoperiod and Ambient Temperature as Environmental Cues for Seasonal Thermogenic Adaptation in the Djungarian Hamster, <i>Phodopus sungorus</i>	<i>G. Heldmaier, S. Steinlechner, J. Rafael and B. Latteier</i> 339
Abstracts of the Twentieth Annual Meeting of the Japanese Society of Biometeorology, Ube, 26-27 November 1981	347
Book Review	248
Abstracts Noted	294, 304, 310, 338, 346

AUTHOR INDEX

Agishi, Y., 191
Aliu, Y. O., 115, 225
Angouridakis, V. E., 53
Aoki, N., 347
Araki, T., 184
Asayama, M., 177-179, 181, 352-354
Battersby, B., 231
Baumer, H., 85
Burt, J. E., 3, 25, 99
Chen Zai-gia, 92
Chorowski, B., 81
Christianson, L., 137
Deacon, E. L., 207
Dlin, R., 153
Doi, K., 174, 350
Dotan, R., 153
Eichmeier, J., 85, 284
Fabris, N., 49
Fujimatsu, H., 354
Fujita, K., 169, 363
Fukushima, M., 187, 358, 364
Gangwar, P. C., 73, 147
Garsd, A., 121
Ghazalli, M. Z., 277
Gloyne, R. W., 1, 206
Guerra, L., 49
Habara, Y., 350
Hahn, G. L., 137
Hamaguchi, K., 186
Hara, M., 185
Harimura, Y., 175
Harlow, H. J., 311
Hasegawa, Y., 177
Hayashi, O., 347, 363
Hayes, J. T., 239
Heath, H. W., 305
Heldmaier, G., 329, 339
Hirakawa, K., 348, 357
Hirata, K., 172, 349
Hiroshige, T., 173
Hori, S., 176, 184, 360
Hori, T., 182, 183, 366-368
Horie, G., 355
Horikoshi, T., 356, 357
Hsia, L. B., 91, 94
Hurlbutt, E. C., 295
Ibamoto, K., 355
Igawa, S., 178
Igono, M. O., 115, 225
Inbar, O., 153
Inoue, N., 351
Iriki, M., 181, 361
Ishigure, K., 185
Isobe, Y., 61; 177
Isoda, N., 187, 188, 189
Itoh, T., 348, 357
Iwami, K., 169
Jaszewski, Z., 81
Jokl, M. V., 37
Kashimura, O., 178, 351
Katayama, K., 193
Kawagoe, K., 356
Kikuchi, M., 169, 347, 363
Kimura, T., 194, 352
King, T. S., 295
Kita, H., 178, 351
Kiyohara, T., 182, 183, 366-368
Kobayashi, T., 187, 356-358, 364
Komiyama, K., 190
Komori, A., 186
Konda, N., 358, 359
Kondo, M., 359
Kondo, Y., 172
Kosaka, M., 180, 359, 361
Koshihara, Y., 179, 362
Kosub, K. Y., 295
Kubo, K., 187, 192, 349, 358, 364
Kurahashi, M., 173
Kuroshima, A., 173, 174, 350
Latteier, B., 339
Li Xiu-gin, 92
Lustik, S., 231
Lynch, G. R., 305
Makino, Y., 61
Makrogiannis, T. J., 53
Margolis, D. J., 305
Matsubara, C., 348
Matsubara, N., 194, 355
Matsui, J., 175
Matsui, R., 178
Mayer, L., 231
Mayuzumi, M., 176, 360
Mazzufferi, G., 49
Meador, N., 137
Memeo, S. A., 49
Midorikawa, T. T., 190, 348
Miki, K., 176, 348, 357
Minamino, O., 187-189-, 354

Miyagawa, T., 177-179, 181, 352-354
Miyazaki, Y., 362
Mohri, M., 171, 363
Molokwu, E. C. I., 225
Miura, T., 194, 195, 352
Momiyama, M., 193
Mori, S., 185
Morimoto, T., 176, 348, 357
Moriya, K., 173
Motohashi, Y., 362
Murakami, N., 171
Nagai, M., 181, 361
Nagao, Y., 186
Nagasaki, T., 171, 172, 183, 349, 353, 366
Nagata, H., 185
Nakai, S., 178
Nakamura, Y., 194
Nakashima, T., 182, 183, 366-368
Nakayama, H., 358, 359
Nakayama, T., 190, 348
Namihira, G., 184
Naruse, T., 187, 188, 189
Nieuwolt, 277
Nikolitz, M., 49
Niwa, K., 190, 348
Nonaka, K., 352
Nose, H., 176, 357
Nose, N., 348
Ogawa, T., 177-179, 181, 352-354
Ohara, K., 61, 177, 347
Ohnaka, T., 175, 365
Ohno, T., 350
Ohwatari, N., 180, 359, 361
Okabe, N., 186
Okuda, N., 61, 177
Okuwaki, Y., 169, 363
O'Rourke, P. A., 3, 25, 99, 239
Osaka, T., 182
Piantanelli, L., 49
Phillips, J. A., 311
Pleschka, K., 181
Primault, B., 97
Rafael, J., 339
Ralph, C. L., 311
Reiter, R. J., 295
Riar, S. S., 129
Richardson, B. A., 295
Rollag, M. D., 285
Rotstein, A., 153
Sagawa, S., 385, 359
Saito, S., 186
Sakai, A., 358
Sakurai, Y., 355
Salasinski, K., 165
Sasaki, T., 186, 192, 351
Sato, H., 61, 177
Sawada, S., 170, 360
Sen Gupta, J., 129
Seo, Y., 348
Shanbar Bhat, K., 129
Sharma, S. C., 219
Shibata, H., 172
Shibata, M., 182, 183, 366-368
Shibamoto, T., 358, 364
Shifrine, M., 121
Shimaoka, K., 185
Shimizu, N., 187, 188, 189, 354
Shimura, M., 194, 195, 352
Shinohara, T., 186
Shiraki, K., 358, 359
Smith, C. V., 196
Sneva, F. A., 263
Someoka, S., 359
Steinlechner, S., 329, 339
Sulman, F. G., 153
Sudo, A., 170
Sugano, T., 183
Sugano, Y., 353
Sugenoya, J., 178, 179, 181, 352-354
Tajima, Y., 193
Takano, T., 362
Takeoka, M., 179
Takeoka, T., 362
Tanaka, M., 175, 176, 356-357, 365
Tanaka, N., 360
Terai, Y., 352, 353, 354
Terjung, W. H., 3, 25, 99, 239
Todhunter, P. E., 239
Tochihara, Y., 175, 365
Tromp, S. W., 197, 261
Tsujita, J., 176, 184, 360
Tsuchiya, K., 180, 364
Tsuzuki, S., 349
Ueda, G., 179, 187, 358, 362
Vaughan, M. K., 295
Wang, Yan-wen, 92
Wei Feng-ying, 92
Williams, A. L., 207
Wu Dun-hsu, 94
Yahata, T., 174, 350
Yamada, S., 176, 348
Yamamoto, S., 170, 360

Yamaoka, S., 191
Yamasaki, M., 192
Yamazaki, S., 365
Yoshida, K., 175, 365

Yoshimura, K., 187, 358, 364
Yurugi, R., 172
Zhao Wei-kang, 93